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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,699	11/12/2003	Philip Strong	16291-424	9220

23526 7590 10/05/2004

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EXAMINER

CHIN, PETER

ART UNIT PAPER NUMBER

1731

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,699

Applicant(s)

STRONG ET AL.

Examiner

Peter Chin

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/22/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 9 : The claims recite only the percentage of fiber and starch and thus are incomplete since the remaining portion of the mixture has not been claimed and it is not what the basis for the percentage is, e.g., is it total weight of an aqueous dispersion? Total solids?

Claim 11: it is not clear what the "further processing" refers to ? processing the coating such as calendering the coated paper after drying? The limitation is incomplete.

Claim 12: there is no antecedent basis for white water in claim 10 from which it depends.

2. Claims 1-11,16,18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matsuda et al (6,183,596).

Matsuda et al discloses coating paper either on machine or off machine with a coating containing both starch and "supermicrofibrillated" (SMF) cellulose fiber. SMF is added for its water retention value and thixotropic properties, which are desirable in formulating paper coatings. SMF has a fiber length of 0.05 to 0.3mm (0.00196 to 0.0393 in), column 3. Example 5 shows coating paper with a mixture containing: 0.3 parts Na hexametaphosphate; 90 parts clay; 10 parts Calcium Carbonate; 5 parts oxidized starch; 12 parts SB latex; and 3 parts SMF. This corresponds to 3.8% starch and 2.3% SMF which reads on the claimed "about 2.0%" fiber. In any case, Matsuda et al

discloses as little as 0.1 % of the coating mixture can be used, column 9. last paragraph. Thus, Matsuda et al anticipates or obviously shows the claimed invention.

Claims 3,4,8: the process by which the claimed product is made does not impart any further patentable distinction to the claims in terms of composition or final product properties over the final product, a coated paper in Matsuda et al.

Claim 11: the coating in Matsuda et al is applied before processing the coating such as drying or calendering the coated paper.

Claim 16: Matsuda et al discloses size press, column 9.

Claim 18: the temperature range includes room temperature and thus, does not define over Matsuda et al.

3. Claim 9-11,15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bleakley (5,830,364).

Bleakley discloses on-machine coating of paper with an aggregate of co-precipitated calcium carbonate and white water solids. The white water solids contain up to 85% inorganic substances (column 4) and the remainder, about 15% is the fines fraction which contain microfibers (no greater than 75 micron in length), ink and resin. The aggregate is present in an amount of up to 30% of the paper making composition, last paragraph of column 6. This means that the microfibers in the fines portion is up to about 4.5% if there are no other impurities and which range encompasses the claimed fiber range. Starch is used as an adhesive for the coating column 9. It would have been obvious to employ the claimed amount of starch as it is merely an optimization of the

amount of binder necessary to obtain the desired strength. The claimed applicators are standard coaters used in paper making and thus, would have been obvious choices.

4. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pruszynski (5,830,087).

Pruszynski shows the mixing of white water containing fibers and starch slurry, see Figure 1 and associated text. It would have been obvious to mix the starch and white water at least at room temperature. Note that the claims do not state how the mixture of starch and white water is applied to the mat and thus, includes wet end internal addition as shown by Pruszynski.

5. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vikio (5,449,437) in view of Bleakley (5,830,364).

Vikio shows recovery of fines from a screen device 30, Figure 2 and teaches the reuse of the fines in the papermaking process. This screen is disclosed as either a pressureless screen or a pressurized screen. In the absence of any unexpected results it would have been obvious to select the pressurized screen to recover the fines.

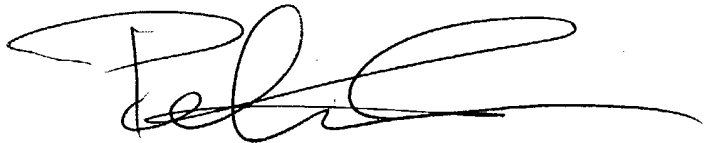
Additionally the claimed fiber length for the fines are well known to be below 0.08 in as evidenced by Bleakley who teaches that fines are characterized by fibers no greater than 75 microns in length, column 4. Claim 21: it would be obvious to use any pressurized screen including the one claimed as long it is capable of separating or recovering fines.

6. Claims 12-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Chin whose telephone number is (571) 272-1186. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Peter Chin', with a long horizontal flourish extending to the right.

Peter Chin
Primary Examiner
Art Unit 1731